

Specifically, the feature of "a second broadcast entry level for enabling a user to enter directly a predetermined one of the first, second and third interactive levels" is clearly disclosed between line 12 on description page 21 and line 3 on description page 22. In particular, it is stated there that the second screen 62 in Figure 4 (which corresponds to the second broadcast entry level) by which a viewer may enter the interactive services is displayed during normal broadcast of a program or an advertisement. It is further stated that, upon selection of an icon that is displayed over the picture inviting the viewer to enter the interactive services, the degree of interaction required with the viewer can vary considerably depending on the wishes of the service provider. For example, if free beer is being offered, the only interaction required would be for the viewer to select the icon, i.e., to select the offered goods. In other words, in such case the displayed screen (i.e., the second broadcast entry level) enables the user directly to enter the third broadcast interactive level which allows for the selection of goods. If, on the other hand, the advertisement is for an automobile, the service provider may require the viewer to enter the interactive services at any of levels 63 to 65 of Figure 4. Accordingly, the specification clearly describes on pages 21 and 22, and illustrates in Figure 4 how the second broadcast entry level feature enables a user to enter directly a predetermined one of the first, second and third broadcast interactive levels.

Accordingly, it is submitted that the limitation added to claim 46 does not constitute new matter, and that claims 46-58 and 69 are fully enabled. Withdrawal of this rejection is requested.

The Examiner has rejected claims 1-4, 6-14, 16, 17, 28-30, 32-37, 39, 40, 46-50, 52, 54, 55, 57-64, 66 and 68 under 35 USC §102(a) as being obvious over Florin et al. (WO 95/01058). In essence, the Examiner contends that independent claims 1 and 28 lack an inventive step over Florin et al. because the use of modems is "extremely well known in the art." In Applicants' opinion, the Examiner has impermissibly considered the integers of the claims separately, and concluded that the claims lack inventive step on the basis that he believes each integer to be known. This approach is unacceptable. Applicants maintain their position that claims 1 and 28 define a patentable invention.

Claim 1 currently on file recites a receiver for receiving broadcast digital television signals representing both image data and information data. The receiver outputs data derived from the image data and information data, the output data representing an interactive image for display. The receiver also comprises a modem. Further, the receiver is responsive to viewer manipulation of an

input device to vary the interactive images, and to cause the modem to establish a telecommunications link to a remote site for online interaction. Claim 28 expresses the above in terms of method features.

The general idea underlying this invention is on the one hand that the interactive image is created from data which is broadcast, and on the other hand that a modem is caused to establish a telecommunications link to a remote site if interaction between the viewer and the remote site is required. This approach has two advantages. First, since the signals representing the data from which the interactive image is created are broadcast, no telecommunications on-line link is required to download data relating to the interactive image. This has the advantage of improving the speed at which different interactive images are displayable. Second, since interaction between the viewer and the remote site is performed via a telecommunications link, transmission bandwidth of the broadcast digital television signals is saved because no dedicated interactive television channel is required. Thus, the claimed invention combines the advantages of providing a high-speed interactive viewer interface without unnecessarily using up valuable transmission bandwidth. This is made possible by the realization that, while interactive images should be available for display at high speed at all times for the selection of an interactive service, the actual viewer/remote site interaction is normally restricted to short periods, e.g., for the purchase of a product offered through a selected interactive service. The invention takes into account these different requirements.

Applicants believe that the cited prior art does not disclose or suggest the above features. Florin et al. discloses the use of a plurality of dedicated back channels to engage in a variety of transactions, such as ordering products, pay-per-view movies, etc. In operation, any request by a user to view a pay-per-view movie or to order a product is transmitted over at least one back channel. This is clearly different from the present invention.

It is irrelevant whether or not using a modem for establishing a telecommunications link is known in the art, as suggested by the Examiner. The question is whether or not the prior art (i.e., Florin et al.) discloses or suggests use of the modem in the way claimed in claims 1 and 28. The answer to this question is in the negative. Florin et al. is simply silent as to the features of claims 1 and 28 of how the modem is used in interactive services. In particular, Florin et al. does not disclose or suggest that the interactive images are created from data which is broadcast, while the

data pertinent to viewer/remote site interaction is transmittable via a telecommunication link. Florin et al. teaches something different, namely to transmit data pertinent to viewer/remote site interaction via television back channels. According, Applicants believe that Florin et al. does not disclose or suggest the claimed invention.

The Examiner has argued that the feature of a second broadcast entry level for enabling a user to enter directly a predetermined one of the first, second and third broadcasting interactive levels in claim 46 is "extremely well known in the interactive screen art." Applicants believe that the question as to whether a claim lacks novelty or inventive step should be assessed on the basis of the available prior art. If the Examiner believes that this feature is well known, then he should direct Applicants to the relevant portion of a prior art document to support this belief. However, merely to state that a feature is known without supporting such statement by a prior art document cannot be an acceptable approach. It is mere speculation. As a matter of fact, Florin et al. is completely silent as to the second broadcast entry level feature. Accordingly, Applicants believe that claim 46 is patentably distinguished over Florin et al. Similarly, Applicants do not believe that Florin et al. discloses the limitations of independent claims 61-63.

Since Florin et al. fails to disclose or suggest the invention of claims 1, 28, 46 and 61-63, Florin et al. also fails to disclose or suggest the claims dependent thereupon, i.e., claims 1-8 and 10-69. Withdrawal of this rejection is requested.

The Examiner has rejected claims 18-22, 41-45 and 56 under 35 USC §103(a) as being obvious over Florin et al. It is submitted that these claims are not obvious over Florin et al. for the reasons discussed above. Withdrawal of this rejection is requested.

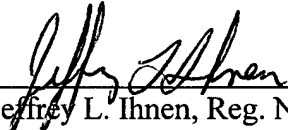
The Examiner has rejected claims 5, 15, 31, 38, 51, 53, 65 and 67 under 35 USC §103(a) as being obvious over Florin et al. in view of Hendricks et al. (WO 94/14284. Since the independent claims are not obvious over Florin et al. as discussed above, it is submitted that these dependent claims are not obvious over the cited combination of prior art. Withdrawal of this rejection is requested.

The Examiner has rejected claims 23-27 under 35 USC §103(a) as being obvious over Florin et al. in view of Diehl et al. (EP 0562295). Since the independent claims are not obvious over Florin

et al. as discussed above, it is submitted that these dependent claims are not obvious over the cited combination of prior art. Withdrawal of this rejection is requested.

In view of the above amendment and remarks, it is believed that the claims satisfy the provisions of the patent statutes and are patentable over the prior art. Reconsideration and early notice of allowance are requested.

Respectfully submitted,

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Dated: 01 August 2000

However, banks will shortly be moving over to "smart" cards because such cards offer greater security than conventional magnetic strip cards. The second card reader 16b may therefore be suitable for use with smart cards. A third possibility would be to use electronic cards which are "charged" with a cash value and the cash value is reduced by the cost of the transaction each time the card is used. The second card reader 16b may be suitable for use with a cash card. Regardless of the type of card chosen the security is increased by the second card reader 16b because the viewer must present to the decoder the company subscription card and the PIN number for that card, and the bank card and the PIN number for that card before a transaction will be allowed to proceed.

It was mentioned herein at the beginning of the description of Figure 4 that there are two different screens 61 and 62 by which a viewer may enter the interactive services. The first entry screen 61 has been described hereinabove. The second screen 62 represents a screen that is displayed during normal broadcast of a programme or an advertisement. During the broadcast an icon 179 is displayed over the picture inviting the viewer to enter the interactive services. For example, during a sports programme sponsored by a brewery an icon may be displayed offering free beer, or during an advertisement for a car an icon may be displayed inviting the viewer to book a test drive.

Data representing the icon is transmitted together with a short program containing instructions as to how the processor 23 is to respond to viewer selection of the icon. The degree of interaction required with the viewer can vary considerably depending on the wishes of the service provider. For example, if free beer is being offered the only interaction required may be for the viewer to select the icon. In such a case the processor 23 would be arranged to respond to the selection by establishing a modem connection with a predetermined number and then transmitting to that number details of the viewer. If, on the other hand, the advertisement is for a car, the service provider

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may require the viewer to enter the interactive services at any of levels 63 to 65 as shown in Figure 4 and interact with the displayed screens as already described herein.

As the number of service providers grows it becomes more difficult to display all of the "shops" in the "shopping mall" on a single screen. Different screens may be displayed for different types of services. Alternatively, the screen may be arranged to display only a few of the "shops" in the "mall" at any given instant in time. Figure 12 of the accompanying drawings shows a large "mall" 180 and Figure 13 shows a screen 181 displaying only a few of the "shops" in a portion 182 of the "mall" 180. The screen 181 includes four markers 183 to 186 indicating the directions in which the "mall" extends. The arrows 183 to 185 indicate that the viewer can move to the left and right and down in the "mall" and the bar 186 indicates that the viewer cannot move up. Depending on the level of sophistication that is desired the processor 23 may be arranged either to scroll left and right, and up and down or to move stepwise in those directions. Scrolling is more sophisticated and requires greater processing power and, in order to keep down the cost of the decoder, stepwise movement is presently preferred.

It will be appreciated that the above-described interactive services are merely exemplary and that many other services can, of course, be made available within the described structure. In addition to on-line "shopping" at local or national outlets, local information and other locality-based services may be provided via the combined satellite and modem media. Also, traditionally local services such as job placement can be made national or even international via the combined media. Furthermore, it will be possible using the above-described system for software companies, such as games manufacturers, to provide with television adverts samples of the latest games software for review by potential customers before an order is placed. Placing bets, entering lotteries, etc., will also be possible by way of the combined media.

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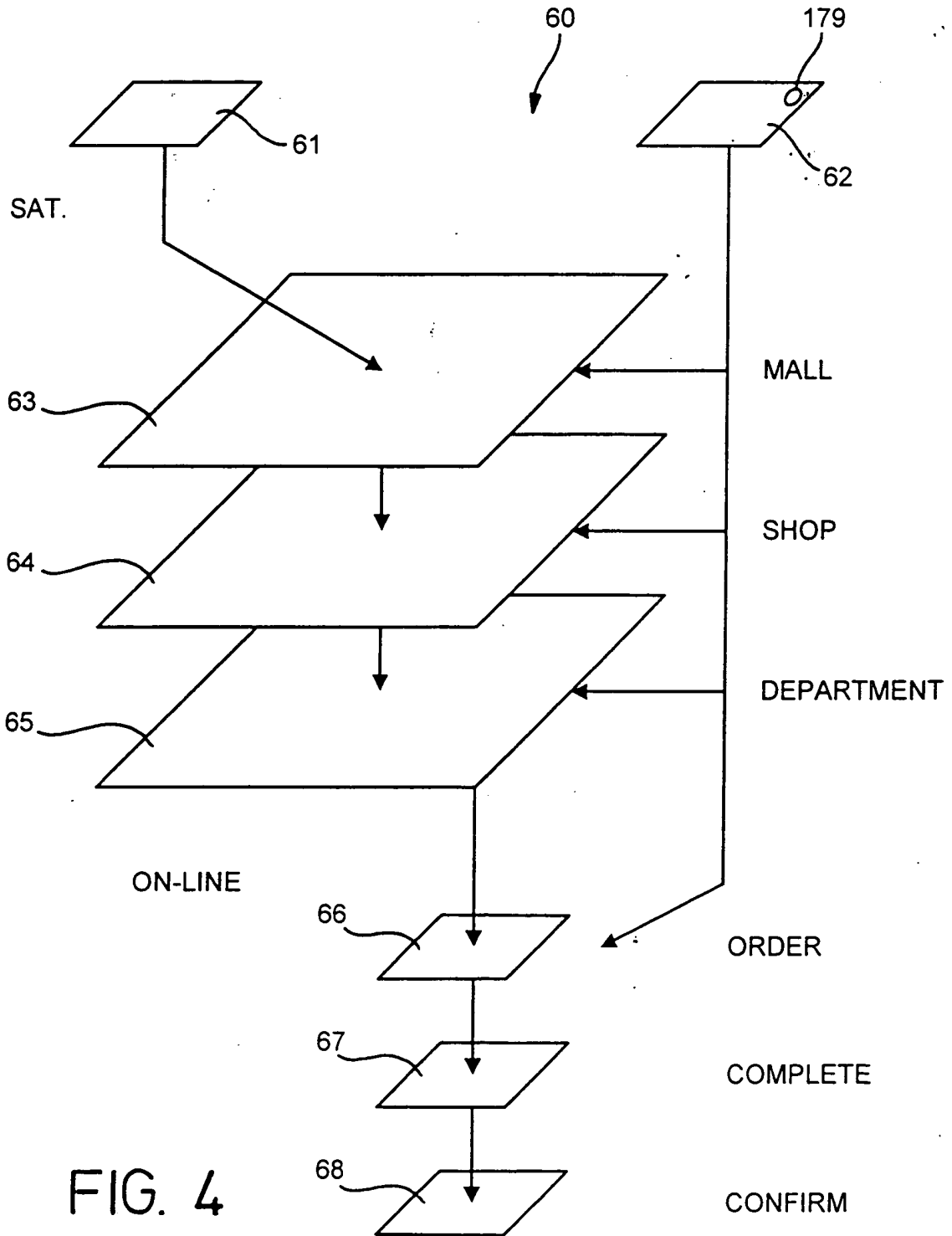


FIG. 4

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